

WHAT IS CLAIMED IS:

1. A buffer circuit comprising:

operational amplification means which is configured to  
5 input an input voltage to a non-inverted input terminal and  
inputs a voltage output from an output terminal to a reverse  
input terminal through feedback; and

output acceleration means which receives the input voltage  
and the output voltage as differential inputs and which outputs  
10 an electric current larger than the current output from the  
operational amplification means to the output terminal when  
a difference exceeding a predetermined offset voltage exists  
between the two inputs.

15 2. The buffer circuit according to claim 1, wherein the  
output acceleration means has a differential amplification  
section having the predetermined offset voltage, and a switching  
section which is connected between a source potential and the  
output terminal and is activated or deactivated in accordance  
20 with an output from the differential amplification section.

3. The buffer circuit according to claim 2, wherein the  
differential amplification section has a first differential  
amplification circuit which produces a first output when the  
25 input voltage is higher than the output voltage by an amount  
corresponding to a first offset voltage, and a second  
differential amplification circuit which produces a second  
output when the output voltage is higher than the input voltage  
by an amount corresponding to a second offset voltage; and  
30 wherein the switching section has a first switching circuit  
which is connected between a first source potential and the  
output terminal and is activated or deactivated in accordance  
with the first output, and a second switching circuit which  
is connected between the output terminal and a second source  
35 potential and is activated or deactivated in accordance with  
the second output.

4. The buffer circuit according to claim 2, wherein the operational amplification means is formed such that an electric current output from a first source potential to the output terminal is limited to a predetermined current value and such that an electric current output from the output terminal to a second source potential flows by way of the switching circuit; and wherein the output acceleration means has a differential amplification section having the predetermined offset voltage and a switching section which is connected between the first source potential and the output terminal and is activated or deactivated in accordance with an output from the differential amplification section.

5. The buffer circuit according to claim 1, wherein said buffer circuit is used for at least any one of a plurality of buffer circuits which is used for a driver IC.

6. The buffer circuit according to claim 1, wherein said operational amplification means is an operational amplifier which includes a plurality of constant current sources.